

REMARKS

The Office Action dated March 22, 2006 has been reviewed and carefully considered. Claims 1 -21 remain pending, the only independent claims being claims 1 and 15. Reconsideration of the above-identified application, as amended and in view of the following remarks, is respectfully requested.

The examiner has objected to claims 9, 10, 12 and 18 due to various informalities. The claims have been amended to correct these matters. Support for the amendments to claims 9, 10 and 12 is found, inter alia, in Fig. 1A, item 190 of the specification. Support for the amendment to claim 18 is found, inter alia, in paragraph 52 of the published application. With these amendments to the claims, applicant believes that the reasons for the examiner's objections have been overcome. Applicant respectfully requests the objection be withdrawn.

Claims 1-3, 5-12, 14, 15, 17, 19 and 20 stand rejected under 35 USC 102(b) as being anticipated by Graves, U.S. Patent No. 5,410,344.

Applicant respectfully disagrees with, and explicitly traverses, the examiner's reason for rejecting the claims.

Claim 1 recites:

A method for providing hierarchical decision fusion of recommender scores, said method comprising the steps of :

- (a) providing a plurality of recommenders at a first level, said recommenders being grouped to at least one of a plurality of predetermined groups;
- (b) providing a predetermined number of first level fusion centers for receiving an output from each of said recommenders from at least one particular group;
- (c) outputting a decision by each one of said plurality of recommenders grouped in step (a) to a respective first level fusion center, wherein each decision provides a recommendation;
- (d) each respective first level fusion center performing a first fusing step of the decisions output in step (c) by said recommenders from said at least one particular group;
- (e) each respective first level fusion center outputting a first enhanced decision based on the fusion performed in step (d);
- (f) providing a plurality of second level fusion centers for receiving the first enhanced decisions output from a group of said first level fusion centers;
- (g) each respective second level fusion center performing a second fusing step of the first enhanced decisions received from the group of said first level fusion centers;
- (h) each respective second level fusion center outputting a second enhanced decision; and
- (i) outputting to a user a finally enhanced decision chosen from the enhanced decisions in step (h).

Graves teaches "a method and apparatus for selecting audiovisual programs for presentation to a viewer" (Abstract). Graves uses content codes corresponding to attributes of the audiovisual programs to derive his selection. In particular, and as cited in the Office Action's rejection of claim 1, Graves uses these content codes in a neural

network for “selecting audiovisual programs for presentation to a viewer” (col. 2, lines 23-25).

The Office Action relies on the presence of items 50 of Fig. 8 as teaching the claimed feature of a first level fusion center and in particular, “each respective first level fusion center outputting a first enhanced decision based on the fusion performed” (step (e) of claim 1). However, as depicted in Fig. 8 and as defined by Graves in his specification:

the single neuron layer 52, which presents an output from network 46, is referred to as the output layer. Note that the output layer could include additional neurons as well. In the present embodiment, the output represents the grade for the program being analyzed. The layer of neurons 50, each of which receives inputs from input neurons 48, and presents an output to output neuron 52, is commonly referred to as a hidden layer (col. 8, lines 49-51).

In the present invention, the applicant notes that each fusion layer of his application can be performed by a variety of means (“weighted averages, voting, neural networks, and Dempster-Shaffer Evidential Reasoning, are just a few of the many fusion methods known to persons of ordinary skill in the art that can be used”, paragraph 35). Accordingly, applicant submits that Graves is merely an example of the prior art, discussed in paragraph 10 of the present application, wherein “combining ... bits of information across domains is possible in one fusion step.”

The present invention is a method and system that obtains recommendations about different areas and/or topics which interest the user by hierarchical fusion from a plurality of recommenders. Use of such a hierarchical structure permits greater flexibility, leading to better prediction accuracy, over the prior art. As but one example noted in the specification:

The hierarchy may not need to be utilized up to the nth level in all cases. For example, if a recommendation score is within a certain predefined range at a lower level, (for example) the second level of fusion centers, the recommendation can be made to the user without the necessity of utilizing the system resources associated with having the highest level fusion center provide the recommendation. This flexibility can be advantageous when a recommender system is making recommendations to a plurality of users during at least a partially overlapping period. (Paragraph 34)

The Graves' invention is incompatible with such flexibility as he does not teach or suggest the use a hierarchical process as that term is defined by both the present invention and Graves himself -- the neural net of Graves is just one "level of fusion" of claim 1 of the present invention. Accordingly applicant submits that claim 1 is patentable over Graves as he fails to teach or suggest the "hierarchical decision fusion of recommender scores" and the various fusion levels features recited in claim 1.

A claim is anticipated only if each and every element recited therein is expressly or inherently described in a single prior art reference. Graves cannot be said to anticipate the present invention, because Graves fails to disclose each and every element recited.

Having shown that Graves fails to disclose each and every element claimed, applicant submits that the reason for the Examiner's rejection of method claim 1 and corresponding system claim 15 have been overcome and can no longer be sustained. Applicant respectfully requests reconsideration, withdrawal of the rejection and allowance of claims 1 and 15.

With regard to claims 2-14 and 16-21, these claims ultimately depend from one of the independent claims, which have been shown to be not anticipated and allowable in view of the cited references. Accordingly, claims 2-14 and 16-21 are also allowable by virtue of their dependence from an allowable base claim.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

Dan Piotrowski
Registration No. 42,079



By: Thomas Onka
Attorney for Applicant
Registration No. 42,053

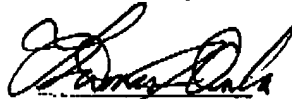
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Mail all correspondence to:
Dan Piotrowski, Registration No. 42,079
US PHILIPS CORPORATION
P.O. Box 3001
Briarcliff Manor, NY 10510-8001
Phone: (914) 333-9624
Fax: (914) 332-0615

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Thomas J. Orka
(Name of Registered Rep.)

 6/15/06
(Signature and Date)